

ABSTRACT OF THE DISCLOSURE

An image processing apparatus for quantizing image data indicative of a density gradation level of a constituent pixel of an image into a discrete value on the basis of quantization levels of a number smaller than the maximum density gradation level and not smaller than two. The apparatus comprises: an N-level/M-level quantization circuit for quantizing image data of an object pixel on an N-level basis or on an M-level basis; an error diffusion circuit for distributing an error generated through the N-level quantization or the M-level quantization to peripheral pixels around the object pixel; an N-level quantization threshold setting circuit for setting an N-level quantization threshold in a periodically variable manner; and a process setting circuit for causing the N-level/M-level quantization circuit to perform the M-level quantization for pixels adjacent to a pixel corresponding to either or both of a peak point and a saddle point in the periodic variation of the N-level quantization threshold and causing the N-level/M-level quantization circuit to perform the N-level quantization for pixels corresponding to the peak point and the saddle point.